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     (FILE 'HOME' ENTERED AT 08:48:23 ON 27 SEP 2003)

     INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
     BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
     CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
     DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 08:48:35 ON
     27 SEP 2003

     FILE 'REGISTRY' ENTERED AT 08:49:10 ON 27 SEP 2003
               E ALPHA-1,2-FUCOSYLTRANSFERASE/CN
L1             1 S E4

     INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI,
     BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,
     CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB,
     DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 08:50:26 ON
     27 SEP 2003
               SEA ALPHA-1,2-FUCOSYLTRANSFERASE
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                3   FILE ADISCTI
                1   FILE ADISNEWS
                4   FILE AGRICOLA
              202   FILE BIOSIS
              115   FILE BIOTECHNO
               31   FILE CABA
               39   FILE CANCERLIT
              219   FILE CAPLUS
                1   FILE CONFSCI
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              135   FILE EMBASE
              112   FILE ESBIOBASE
                1   FILE FEDRIP
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                1   FILE FSTA
              208   FILE GENBANK
               32   FILE IFIPAT
                6   FILE JICST-EPLUS
               65   FILE LIFESCI
              134   FILE MEDLINE
                5   FILE PASCAL
              202   FILE SCISEARCH
               48   FILE TOXCENTER
               89   FILE USPATFULL
                4   FILE USPAT2
               17   FILE WPIDS
               17   FILE WPINDEX
L2              QUE ALPHA-1,2-FUCOSYLTRANSFERASE
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     FILE 'CAPLUS, BIOSIS, SCISEARCH, EMBASE, MEDLINE, BIOTECHNO, ESBIOBASE,
     USPATFULL, LIFESCI, TOXCENTER, CANCERLIT' ENTERED AT 08:52:52 ON 27 SEP
     2003
L3             0 S L1 AND RAT
L4           238 S L2 AND RAT
L5           105 S L4 AND (ISOLAT? OR PURIF?)
L6             6 S L5 AND (GM1 SPECIFIC)
L7            79 DUP REM L5 (26 DUPLICATES REMOVED)
L8             8 S L2 AND (GM1 SPECIFIC)
L9             4 DUP REM L6 (2 DUPLICATES REMOVED)
L10            6 DUP REM L8 (2 DUPLICATES REMOVED)
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1: J Biol Chem. 1992 Feb 5;267(4):2737-44. Related Articles, Links

Purification of the secretor-type beta-galactoside alpha 1----2-fucosyltransferase from human serum.

Sarnesto A, Kohlin T, Hindsgaul O, Thurin J, Blaszczyk-Thurin M.

Wistar Institute of Anatomy and Biology, Philadelphia, Pennsylvania 19104-4268.

The secretor-type beta-galactoside alpha 1----2-fucosyltransferase from human serum was purified by hydrophobic chromatography on phenyl-Sepharose, ion-exchange chromatography on sulfopropyl-Sepharose, and affinity chromatography on GDP-hexanolamine-Sepharose. Final purification of the enzyme was achieved by high pressure liquid chromatography gel filtration and resulted in a homogeneous protein as determined by sodium dodecyl sulfate-polyacrylamide gel electrophoresis of the radiolabeled protein. The native enzyme appears as a molecule of apparent Mr 150,000 as determined by gel filtration high pressure liquid chromatography. The apparent Mr of the enzyme resolved in the presence of beta-mercaptoethanol by sodium dodecyl sulfate-polyacrylamide gel electrophoresis was determined to be 50,000, indicating a multisubunit structure of the enzyme. Secretor-type alpha 1----2-fucosyltransferase is a glycoprotein as determined by WGA binding properties. A comparison of the Mr of the native blood group H gene encoded with the secretor-type beta-galactoside alpha 1----2-fucosyltransferases as well as comparison of subunit Mr for both enzymes suggests structural similarity. The alpha 1----2 linkage formed between alpha-L-fucose and terminal beta-D-galactose by the purified H- and secretor-type alpha 1----2-fucosyltransferases was determined by 1H NMR homonuclear cross-irradiation analysis of the oligosaccharide products. The substrate specificity and Km values calculated from the initial rate using various oligosaccharide acceptors showed that purified enzymes differ primarily in affinity for phenyl-beta-D-galactopyranoside and GDP-fucose as well as type 1 (Gal beta 1----3GlcNAc), 2 (Gal beta 1----4GlcNAc), and 3 (Gal beta 1----3GalNAc) oligosaccharide acceptors. The secretor-type alpha 1----2-fucosyltransferase shows significantly lower affinity than the H enzyme for phenyl-beta-D-galactopyranoside and GDP-fucose as well as for type 2 oligosaccharide acceptors. On the contrary, type 1 and 3 oligosaccharide acceptors are preferentially utilized by the secretor-type enzyme as compared with the H enzyme. The enzymes also differ in several physicochemical properties, implying

nonidentity of the two enzymes (Sarnesto, A., Kohlin, T., Thurin, J., and Blaszczyk-Thurin, M. (1990) J. Biol. Chem. 265, 15067-15075).

PMID: 1733969 [PubMed - indexed for MEDLINE]

L9 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 1998:516077 CAPLUS
DOCUMENT NUMBER: 129:258609
TITLE: Cloning and expression of the catalytic domain from **rat** hepatoma H35 cell GDP-fucose:GM1 .alpha.1.fwdarw.2fucosyltransferase, an enzyme which is activated during early stages of chemical carcinogenesis in **rat** liver
AUTHOR(S): Sherwood, Anne L.; Holmes, Eric H.
CORPORATE SOURCE: Department of Cell Surface Biochemistry, Northwest Hospital, Pacific Northwest Cancer Foundation, Seattle, WA, 98125, USA
SOURCE: Archives of Biochemistry and Biophysics (1998), 355(2), 215-221
CODEN: ABBIA4; ISSN: 0003-9861
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A ganglioside **GM1-specific** .alpha.1.fwdarw.2fucosyltransferase is induced during the early stages of chem. carcinogenesis with N-2-acetylaminofluorene (AAF) in **rat** liver hepatocytes. The induction of this enzyme gives rise to the expression of a fucose-contg. ganglioside with the same determinant structure as blood group B on a GM1 ganglioside core. Fucoganglioside synthesis is not found in normal **rat** liver but is elevated in premalignant liver and is often highly expressed in derived **rat** hepatoma cell lines. Based upon the consensus sequence from portions of previously cloned human, rabbit, and **rat** .alpha.1.fwdarw.2fucosyltransferase enzymes, primers were designed which were used in RT-PCR expts. with **rat** hepatoma H35 cell total RNA to generate cDNAs encoding the extracellular, catalytic domain of the H35 cell .alpha.1.fwdarw.2fucosyltransferase. Sequencing of these PCR fragments showed them to encode a novel enzyme with high homol. to other cloned enzymes, particularly secretor .alpha.1.fwdarw.2fucosyltransferases . The derived sequence indicated that the 3' portion of the gene was virtually identical to the .alpha.1.fwdarw.2fucosyltransferase B (FTB) fragment reported earlier in **rat** PROb colon-adenocarcinoma cells (J-P. Piau et al. Biochem. J. 300, 623-626, 1994). A PCR product corresponding to the H35 cell .alpha.1.fwdarw.2fucosyltransferase was obtained from total RNA **isolated** from F344 **rat** liver after 0.03% N-2-acetylaminofluorene administration. No PCR product was obtained from total RNA **isolated** from normal F344 liver using PCR primers for the H35 cell .alpha.1.fwdarw.2fucosyltransferase. The H35 cell .alpha.1.fwdarw.2fucosyltransferase was expressed in the pPROTA vector and the derived fusion protein demonstrated the ability to transfer fucose to ganglioside GM1 but not to the neolacto-series acceptor nLcOse4Cer. (c) 1998 Academic Press.
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 2
ACCESSION NUMBER: 1990:133860 BIOSIS
DOCUMENT NUMBER: BA89:72671
TITLE: GDP-FUCOSE GM-1 **ALPHA-1-2-FUCOSYLTRANSFERASE** IS ACTIVATED IN PARENCHYMAL CELLS OF **RAT** LIVER DURING EARLY STAGES OF N-2 ACETYLAMINOFLUORENE INDUCED HEPATOCARCINOGENESIS.
AUTHOR(S): HOLMES E H
CORPORATE SOURCE: PACIFIC NORTHWEST RES. FOUND., 720 BROADWAY, SEATTLE, WASH. 98122, USA.
SOURCE: CARCINOGENESIS (LOND), (1990) 11 (1), 89-94.
CODEN: CRNGDP. ISSN: 0143-3334.

FILE SEGMENT: BA; OLD
LANGUAGE: English

AB Gangliosides from liver parenchymal and non-parenchymal cells were **isolated** from Fischer 344 **rats** that had been fed normal diet or a diet supplemented with 0.03% N-2-acetylaminofluorene (AAF) for 4 weeks. Gangliosides from liver cell fractions were characterized by an induction of both II3NeuAcIV3.alpha.GalIV2FucGg4 and GM3 synthesis in the parenchymal cells of AAF-fed animals which were missing in parenchymal cells from animals fed normal diet. In addition, new bands corresponding to GM1 and GD1a were observed in cell fractions of AAF-fed animals. The activity of the **GM1-specific** .alpha.1.fwdarw.2fucosyltransferase induced after AAF feeding was found to be enriched 5- to 6-fold in the parenchymal cell fraction of AAF-fed animals and correlated with the parenchymal cell marker enzyme glucose-6-phosphatase in these cell fractions. Feeding animals the hepatotoxin acetaminophen at 1.87% in the diet for 10 weeks resulted in no increase in the levels of the .alpha.1.fwdarw.2fucosyltransferase. Antibodies specific for II3NeuAcIV3.alpha.GalIV2FucGg4 were produced and utilized in tissue localization studies. These results indicated little or no staining of normal liver tissue or that after acetaminophen feeding was observed. In contrast, focal areas of staining of liver tissue from animals after 3 weeks of 0.03% AAF feeding were readily apparent. These results indicate that induction of .alpha.1.fwdarw.2fucosyltransferase and fucoganglioside synthesis is most probably a property of liver parenchymal cells and is associated with events occurring during early stages of AAF-induced carcinogenesis.

=> d l10 ibib ab 1-6

L10 ANSWER 1 OF 6 USPATFULL on STN
ACCESSION NUMBER: 2002:251220 USPATFULL
TITLE: Nucleic acids and proteins of a rat ganglioside **GM1-specific alpha 1-2 fucosyltransferase** and uses thereof
INVENTOR(S): Holmes, Eric H., Bothell, WA, UNITED STATES
Sherwood, Anne L., Mountlake Terrace, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002137165	A1	20020926
APPLICATION INFO.:	US 2001-40863	A1	20011101 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-298886, filed on 23 Apr 1999, GRANTED, Pat. No. US 6329170
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 62
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Page(s)
LINE COUNT: 2545
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase is disclosed. Nucleotide sequences of a rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase, amino acid sequences of its encoded protein (including peptide or polypeptide), and derivatives thereof are described. Also described are fragments (and derivatives and analogs thereof) which comprise a domain of rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase with catalytic activity. Methods of production of rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase and derivatives and analogs thereof (e.g. by recombinant means) are provided. Methods of inhibiting the function of rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase (e.g. by means of antisense RNA) are provided. Methods of commercial scale use of the rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase in the production of fucosyl-saccharide compositions are described. Applications of these compositions, e.g. as additives for human nutritive compositions or immunotherapeutics for cancer, are disclosed.

L10 ANSWER 2 OF 6 USPATFULL on STN
ACCESSION NUMBER: 2002:235466 USPATFULL
TITLE: Nucleic acids and proteins of a rat ganglioside **GM1-specific alpha 1-2 fucosyltransferase** and uses thereof
INVENTOR(S): Holmes, Eric H., Bothell, WA, UNITED STATES
Sherwood, Anne L., Mountlake Terrace, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002127655	A1	20020912
APPLICATION INFO.:	US 2001-999672	A1	20011031 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-298886, filed on 23 Apr 1999, GRANTED, Pat. No. US 6329170
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 62
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Page(s)
LINE COUNT: 2921
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase is disclosed. Nucleotide sequences of a rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase, amino acid sequences of its encoded protein (including peptide or polypeptide), and derivatives thereof are described. Also described are fragments (and derivatives and analogs thereof) which comprise a domain of rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase with catalytic activity. Methods of production of rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase and derivatives and analogs thereof (e.g. by recombinant means) are provided. Methods of inhibiting the function of rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase (e.g. by means of antisense RNA) are provided. Methods of commercial scale use of the rat ganglioside GM.sub.1-specific .alpha.1.fwdarw.2fucosyltransferase in the production of fucosyl-saccharide compositions are described. Applications of these compositions, e.g. as additives for human nutritive compositions or immunotherapeutics for cancer, are disclosed.

L10 ANSWER 3 OF 6 LIFESCI COPYRIGHT 2003 CSA on STN
ACCESSION NUMBER: 2002:69981 LIFESCI
TITLE: Nucleic acids and proteins of a rat ganglioside **GM1 -specific** alpha 1-2fucosyltransferase and uses thereof
AUTHOR: Holmes, E.H.; Sherwood, A.L.
CORPORATE SOURCE: Northwest Hospital
SOURCE: (20011211) . US Patent: 6329170; US CLASS: 435/69.1; 435/243; 435/320.1; 435/325; 435/455; 536/23.1; 536/23.2; 536/23.5.
DOCUMENT TYPE: Patent
FILE SEGMENT: W3
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A rat ganglioside GM sub(1)-specific alpha 1-2fucosyltransferase is disclosed. Nucleotide sequences of a rat ganglioside GM sub(1)-specific alpha 1-2fucosyltransferase, amino acid sequences of its encoded protein (including peptide or polypeptide), and derivatives thereof are described. Also described are fragments (and derivatives and analogs thereof) which comprise a domain of rat ganglioside GM sub(1)-specific alpha 1-2fucosyltransferase with catalytic activity. Methods of production of rat ganglioside GM sub(1) -specific alpha 1-2fucosyltransferase and derivatives and analogs thereof (e.g. by recombinant means) are provided. Methods of inhibiting the function of rat ganglioside GM sub(1) -specific alpha 1-2fucosyltransferase (e.g. by means of antisense RNA) are provided. Methods of commercial scale use of the rat ganglioside GM sub(1) -specific alpha 1-2fucosyltransferase in the production of fucosyl-saccharide compositions are described. Applications of these compositions, e.g. as additives for human nutritive compositions or immunotherapeutics for cancer, are disclosed.

L10 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:772468 CAPLUS
DOCUMENT NUMBER: 133:331436
TITLE: Nucleic acids and proteins of a rat ganglioside **GM1-specific** .alpha.1.fwdarw.2fucosyltransferase and synthetic uses
INVENTOR(S): Holmes, Eric H.; Sherwood, Anne L.
PATENT ASSIGNEE(S): Pacific Northwest Cancer Foundation, USA
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000064464	A1	20001102	WO 1999-US7384	19990423

W: CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: WO 1999-US7384 19990423

AB A rat ganglioside **GM1-specific** .alpha.1.fwdarw.2fucosyltransferase (I) is disclosed. Nucleotide sequences of a rat I, amino acid sequences of its encoded protein (including peptide or polypeptide), and derivs. thereof are described. Also described are fragments (and derivs. and analogs thereof) which comprise a domain of rat I with catalytic activity. Methods of prodn. of rat I and derivs. and analogs thereof (e.g. by recombinant means) are provided. Methods of inhibiting the function of rat I (e.g. by means of antisense RNA) are provided. Methods of com. scale use of the rat I in the prodn. of fucosyl-saccharide compns. are described. Applications of these compns., e.g. as additives for human nutritive compns. or immunotherapeutics for cancer, are also disclosed.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 1998:516077 CAPLUS
DOCUMENT NUMBER: 129:258609
TITLE: Cloning and expression of the catalytic domain from rat hepatoma H35 cell GDP-fucose:GM1 .alpha.1.fwdarw.2fucosyltransferase, an enzyme which is activated during early stages of chemical carcinogenesis in rat liver
AUTHOR(S): Sherwood, Anne L.; Holmes, Eric H.
CORPORATE SOURCE: Department of Cell Surface Biochemistry, Northwest Hospital, Pacific Northwest Cancer Foundation, Seattle, WA, 98125, USA
SOURCE: Archives of Biochemistry and Biophysics (1998), 355(2), 215-221
CODEN: ABBIA4; ISSN: 0003-9861
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A ganglioside **GM1-specific** .alpha.1.fwdarw.2fucosyltransferase is induced during the early stages of chem. carcinogenesis with N-2-acetylaminofluorene (AAF) in rat liver hepatocytes. The induction of this enzyme gives rise to the expression of a fucose-contg. ganglioside with the same determinant structure as blood group B on a GM1 ganglioside core. Fucoganglioside synthesis is not found in normal rat liver but is elevated in premalignant liver and is often highly expressed in derived rat hepatoma cell lines. Based upon the consensus sequence from portions of previously cloned human, rabbit, and rat .alpha.1.fwdarw.2fucosyltransferase enzymes, primers were designed which were used in RT-PCR expts. with rat hepatoma H35 cell total RNA to generate cDNAs encoding the extracellular, catalytic domain of the H35 cell .alpha.1.fwdarw.2fucosyltransferase. Sequencing of these PCR fragments showed them to encode a novel enzyme with high homol. to other cloned enzymes, particularly secretor .alpha.1.fwdarw.2fucosyltransferases . The derived sequence indicated that the 3' portion of the gene was virtually identical to the .alpha.1.fwdarw.2fucosyltransferase B (FTB) fragment reported earlier in rat PROb colon-adenocarcinoma cells (J-P. Piau et al. Biochem. J. 300, 623-626, 1994). A PCR product corresponding

to the H35 cell .alpha.1.fwdarw.2fucosyltransferase was obtained from total RNA isolated from F344 rat liver after 0.03% N-2-acetylaminofluorene administration. No PCR product was obtained from total RNA isolated from normal F344 liver using PCR primers for the H35 cell .alpha.1.fwdarw.2fucosyltransferase. The H35 cell .alpha.1.fwdarw.2fucosyltransferase was expressed in the pPROTA vector and the derived fusion protein demonstrated the ability to transfer fucose to ganglioside GM1 but not to the neolacto-series acceptor nLcOse4Cer. (c) 1998 Academic Press.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 6 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 2

ACCESSION NUMBER: 1990:133860 BIOSIS
DOCUMENT NUMBER: BA89:72671
TITLE: GDP-FUCOSE GM-1 **ALPHA-1-2-FUCOSYLTRANSFERASE** IS ACTIVATED IN PARENCHYMAL CELLS OF RAT LIVER DURING EARLY STAGES OF N-2 ACETYLAMINOFLUORENE INDUCED HEPATOCARCINOGENESIS.
AUTHOR(S): HOLMES E H
CORPORATE SOURCE: PACIFIC NORTHWEST RES. FOUND., 720 BROADWAY, SEATTLE, WASH. 98122, USA.
SOURCE: CARCINOGENESIS (LOND), (1990) 11 (1), 89-94.
CODEN: CRNGDP. ISSN: 0143-3334.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB Gangliosides from liver parenchymal and non-parenchymal cells were isolated from Fischer 344 rats that had been fed normal diet or a diet supplemented with 0.03% N-2-acetylaminofluorene (AAF) for 4 weeks. Gangliosides from liver cell fractions were characterized by an induction of both II3NeuAcIV3.alpha.GalIV2FucGg4 and GM3 synthesis in the parenchymal cells of AAF-fed animals which were missing in parenchymal cells from animals fed normal diet. In addition, new bands corresponding to GM1 and GD1a were observed in cell fractions of AAF-fed animals. The activity of the **GM1-specific** .alpha.1.fwdarw.2fucosyltransferase induced after AAF feeding was found to be enriched 5- to 6-fold in the parenchymal cell fraction of AAF-fed animals and correlated with the parenchymal cell marker enzyme glucose-6-phosphatase in these cell fractions. Feeding animals the hepatotoxin acetaminophen at 1.87% in the diet for 10 weeks resulted in no increase in the levels of the .alpha.1.fwdarw.2fucosyltransferase. Antibodies specific for II3NeuAcIV3.alpha.GalIV2FucGg4 were produced and utilized in tissue localization studies. These results indicated little or no staining of normal liver tissue or that after acetaminophen feeding was observed. In contrast, focal areas of staining of liver tissue from animals after 3 weeks of 0.03% AAF feeding were readily apparent. These results indicate that induction of .alpha.1.fwdarw.2fucosyltransferase and fucoganglioside synthesis is most probably a property of liver parenchymal cells and is associated with events occurring during early stages of AAF-induced carcinogenesis.